

Deployment of an Asset Monetization Program



Deploying an Asset Monetization Program

Case Study: Asset Monetization of a Microgrid and District Energy system serving a campus with 74 buildings occupying 12 million sqft.

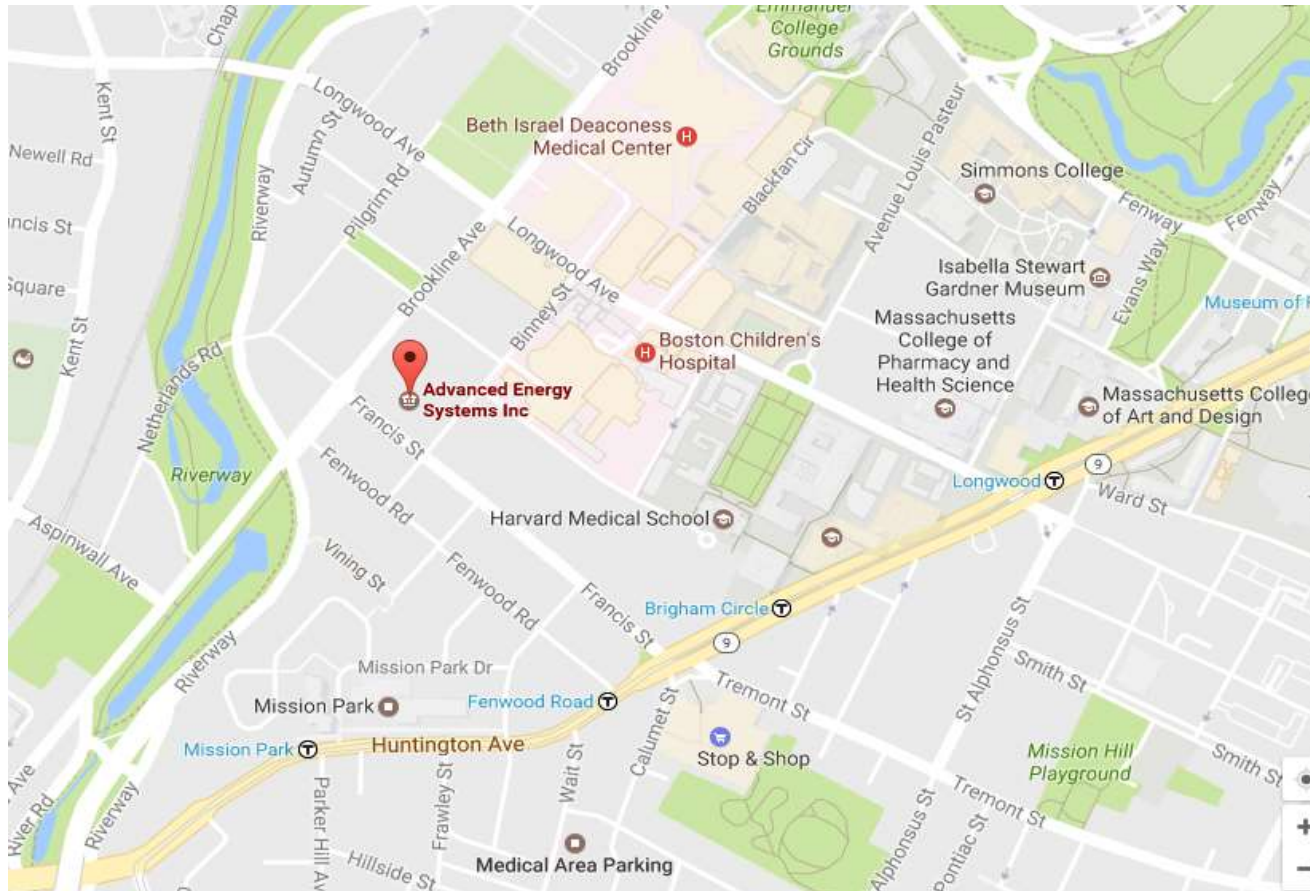
Objective: Present a Summary of :

- Project Profile
- Scope of the Project
- Asset Monetization
- Risks and Benefits
- Keys to Success

Conclusion: Asset Monetization is an enabler to redirect financial resources to support the customers core mission

33-year Partnership With Six preeminent Harvard-Affiliated Healthcare institutions

Integral to Boston's energy infrastructure, delivering efficient and reliable energy to six Harvard-affiliated healthcare institutions that are active in significant research initiatives and healthcare business



MATEP Profile

MATEP is a total energy facility and micro-grid located in Boston, MA that has been serving the Longwood Medical and Academic Area (LMA) with steam, chilled water and electricity for almost 30 years

Footprint and Energy Profile

- 213 Acre campus
- 2,000 hospital beds
- 100,000 inpatients annually
- 2.4 million outpatients annually
- 74 buildings
- 12 million sqft of building space
- 1,000,000 lbs/hr of steam
- 41,000 tons of chilled water
- 99 MW of electricity
- Microgrid Islanding Capability



Longwood Microgrid and District Energy System

Energy Capacity*	99 MW / 62.8 MW
Steam Capacity*	1,000,000 / 550,000 lbs / hr
Chilled Water Capacity*	41,000 / 38,925 tons
Contract Expiry	2051

** Total / Committed Capacity.*

Scope of the Program

As a combined heat and power (CHP) plant, district energy system and micro-grid in one, MATEP provides efficient, sustainable, reliable and resilient energy.



Operation of Utility System that energizes the campus (74 buildings and 12 million sqft) – provides necessary reliability and resiliency



Supply, Procurement & Risk Management of 450 GWh of power, 5 bcf of NG, and other energy commodities



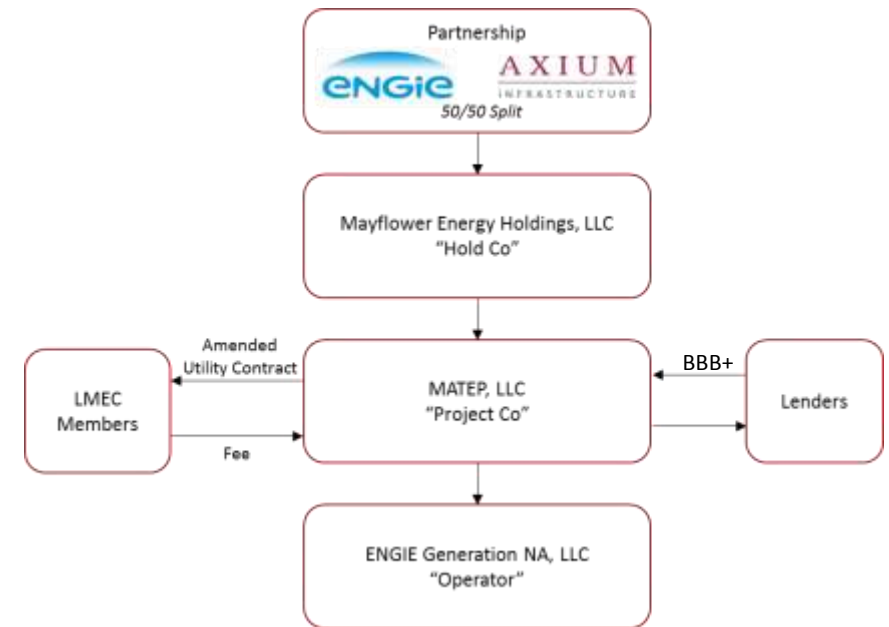
Sustainability with potential investments in Energy Conservation, Solar, Storage, and Facilities Management opportunities of 25 million sqft building space



Asset Modernization includes investment in lifecycle capex

Deal Structure and Financing

- Acquisition of the asset from Morgan Stanley Infrastructure as well as an Upfront Consideration to the participating institutions in exchange for the existing (1.) Microgrid and District Energy assets and (2.) future revenue stream based on a market compatible tariff structure for 33 years
- Market-based tariff, with certain discount, under the Utility Contracts
 - The utilities are provided on the basis of pricing available for levels of service comparable to those provided by the facility, plus regulated and fixed delivery charges for electric, steam and chilled water
 - ENGIE/Axium Consortium responsible for the O&M, Commodity Management, and Asset Management with back-to-back agreements with an ENGIE subsidiary
 - Performance guarantees
 - Consortium responsible for all lifecycle infrastructure investments
 - Lender/Investor friendly structure
- Acquisition is levered and funded with private placement bonds (assigned investment grade BBB+ rating by S&P) and equity (50/50 Split between partners); Revolver issued to fund ongoing CAPEX, capital improvements and operation



Unlocked Value through Asset Monetization And All Services Under A Single Umbrella

Optimization of operating and capital structure that unlocked substantial value for the participating hospitals

- **Asset Monetization:** Optimization of operating and capital structure unlocking substantial upfront value for the participating institutions
- **Expansion Investments:** ENGIE to connect two already planned (Children's in 2020 and Beth Israel in 2022) as well as future expansions in the campus
- **Infrastructure Investments:** Lifecycle investment of \$250 million in the generation and distribution infrastructure in next 33 years
- **Services:** All services under a single umbrella delivered through one vehicle (ENGIE Asset Optimization) under three back-to-back contracts with the consortium (OMA, CMA, AMSA)
 - **O&M:** All operation and maintenance of the central plant as well as thermal and electric distribution system
 - **Development & Construction Management:** Development and construction management of as well as investment into future energy projects (ECM, Solar, Storage and other sustainability initiatives)
 - **Commodity Management:** Generation dispatch; supply procurement, hedging, and risk management of Retail/Wholesale electricity, NG, and ICAP; all interactions with commodity market, utility and ISO
 - **Administrative Services:** Administration of utility agreements; administration of financing facilities and rating agency obligations; governmental filings; regulatory and compliance certifications
 - **Facilities Management:** Potential facilities management services for 25 million building space

Risks and Opportunity

Project risks are highly manageable plus opportunities provide added value for both ENGIE and the Customer

<u>Project Risk</u>	<u>Description</u>	<u>Manageable</u>
Revenues	Whilst the asset is backed by contracts from each hospital, there is no minimum demand requirement from each hospital.	Yes
Regulatory framework	Major change in regulatory framework but can be mostly addressed contractually and structurally	Yes
Credit Rating	Maintain investment grade credit rating for the financing term	Yes
Construction	Expansion projects approved yet not begun construction	Yes

<u>Project Opportunity</u>	<u>Description</u>	<u>Value Add</u>
Current Project Size	100,000MWh of the total load requirement of 450,000MWh is currently sourced from the market	Both ENGIE and Customer
Dispatch Optimization	More optimized dispatch strategy matching load and generation	Both ENGIE and Customer
Platform for new investment	Serve as platform for further Investment in Microgrid/Solar/Battery and other technology infrastructures	Both ENGIE and Customer

Keys to a Successful Program

ENGIE takes a holistic approach to the Asset Monetization Program, leading to added value that goes beyond energy savings and reliable operations

1. Financial strength and global worldwide presence
2. A Strong U.S. presence offering solutions along the entire energy value chain
3. Vertically integrated company with single source accountability
4. Ability to offer an integrated solution addressing the short and long term
5. Unique Value Proposition including Academics and Innovative Technical Solutions